



# Annual Report 2003

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## Highlights of the Year

- 16th Latin American Congress in Clinical Biochemistry, San Jose, Costa Rica,
  - 15<sup>th</sup> IFCC-FESCC European Congress of Clinical Chemistry and Laboratory Medicine – Euromedlab, Barcelona, Spain
  - 11<sup>th</sup> Meeting of the Balkan Clinical Laboratory Federation, Belgrade, Serbia-Montenegro
  - 9<sup>th</sup> Bergmeyer Conference on “Nucleic Acid Markers for Bacterial and Viral Infections”, Eibsee, Germany
  - 2<sup>nd</sup> IFCC/Beckman Conference on Plasma Proteins on “Biological and Cellular Applications of Protein in Medical Laboratory, Barcelona, Spain
  - Joint Committee of Traceability in Laboratory Medicine (JCTLM): formal agreement with BIPM and ILAC
- Creation of two working Groups.  
WG I: Reference Materials and Methods,  
WG II: Reference Laboratories
- The IFCC/Abbott Award for Significant Contributions to Molecular Diagnostics and the IFCC/EDMA Award for Evidence of Effectiveness of Laboratory Tests were bestowed at the occasion of Euromedlab in Barcelona, Spain.

- Update of the web-site: database of IFCC publications, congress database, bookstore
- 1<sup>st</sup> Clinical Molecular Biology Course, Milano, Italy
- Master Course in Clinical Laboratory Sciences, University of La Plata, Argentina
- Evidence Based Laboratory Medicine: publications, collaboration with Bayes library and Cochran group
- IFCC/WHO Certified Reference Preparation for Lp(a)

## President's Message

We are living in an exciting time with a lot of progress in science and technology. We are now learning that no field stands alone. Progress in one field is absolutely dependent on the progress in many other disciplines. Laboratory Medicine plays an interdisciplinary role in Medicine utilizing new advances from biochemistry, biotechnology, communication technology, genetics, immunology, and many others integrating these new developments for better diagnosis, risk assessment, monitoring of patients thus serving health. New biotechnologies stimulating scientific advances are now entering the field of Laboratory Medicine enabling novel approaches in genetic counseling, risk assessment, and individualized medication. The interpretations of all these data for a given individual are made possible by comparisons with large knowledge databases. The real challenge for laboratory specialists is keeping-up with this by continuous training and education. Professional organizations play a pertinent part in implementing new directions in daily operations taking economic constraints and benefits for public health into consideration. IFCC is continuously supporting technological and scientific co-operation and partnerships with various organizations yielding a larger basis of knowledge and expertise. The Federation is stressing exchange of information and experience between countries and regions so that decisions about introduction of new technologies into our professional daily lives can be taken.

The Scientific Division (Chair: Jean.-Claude FOREST) has continued in its efforts in standardization and in the development of reference systems for harmonization of laboratory results worldwide. As a result of these achievements, several new certified reference materials, reference methods and networks of expert laboratories have

been established. Several of these activities are conducted in collaboration with international/regional organizations (BIPM, IRMM, ISO, ISTM, IUPAC, NCCLS, WHO etc.). IFCC stressed the need for a global initiative for traceability in Laboratory Medicine, since we are confident that following this concept laboratory tests results can be harmonized globally, analytical errors reduced thus making interpretation easier for clinicians. A collaboration agreement with BIPM/CCQM and ILAC for co-operation and collaboration in the new Joint Committee of Traceability in Laboratory Medicine (JCTLM) was signed. Under the umbrella of the JCTLM two Working Groups for professionals, metrologists and experts from IVD industry (WG I: Reference Materials and Methods, WG II: Reference Laboratories) have been created and started their work in 2003. On basis of metrological based rules a list of materials and methods useful for establishment of traceability is in progress and will be published early in 2004. Thus the IVD industry will be able to fulfill the requirements set out in the European Directive. The special and close working relationships with IRMM, and NCCLS resulted in further joint projects. With IRMM the efforts for standardization of enzyme measurements, protein measurements and genetic testing continued. Projects on determination of limits of detection and limits of quantification, metrological traceability and its implementation, and analysis of body fluids in Clinical Chemistry were initiated in collaboration with NCCLS. Due to the expertise within the Scientific Division, others consider the IFCC as the global partner in Clinical Chemistry and Laboratory Medicine.

The Education and Management Division (Chair: G. SANDERS) succeeded in continuous education in the field by running a 2<sup>nd</sup> edition of the master course in close collaboration with the University of La Plata. The Visiting Lecture Programme has been very active in Latin America and the Asian Pacific Region. The 1<sup>st</sup> Clinical Molecular Biology Course based on a template developed by the Committee on Clinical Molecular Biology Curriculum was successfully held in Milan. It is the intention to continue with this course and to expand it also to other regions. Training and implementation of quality assurance in Latin America continued. The Committee on Evidence Based Laboratory Medicine established a close working relationship with the Bayes Library and the IFCC Global Campaign on Diabetes. Working Groups on Educational Material and on Distant Learning utilizing the facilities of the IFCC web site started their activities. With this kind of project it should be possible to bring knowledge to the individual members of IFCC member societies at low cost.

The Congress and Conference Division (Chair: L. VIINIKKA) oversees the organization of IFCC sponsored and auspiced congresses and conferences. The highlight from scientific and social point of this year was the extremely successful EUROMEDLAB 2003 in Barcelona. Our Spanish colleagues were able to organize this IFCC/FESCC congress most efficiently. The 9<sup>th</sup> Bergmeyer Conference on “Nucleic Acid Markers for Bacterial and Viral Infections in Intensive Care and Immunocompromised Patients” brought together experts in this very special field. This conference is considered as a forum of experts reviewing a specialized area and setting trends for further IFCC activities.

The Communication and Publications Division (Chair: B. GOUGET) is responsible for the visibility and promotion of IFCC by the production of monographies, conference proceedings, the handbook, printed PR materials, submission of recommendations/documents to scientific journals, electronic publication the News and the IFCC Journal, and finally organizing the IFCC web site, the IFCC portal to the world. All these ongoing activities are only possible by a team of dedicated and enthusiastic colleagues.

All this and more as described in more detail below is conducted by engaged volunteers spending time and infrastructure from their respective institutions. It is only possible because of a team spirit and friendship between the officers supported by an efficient Office and financially sponsored by the Member Societies and the Corporate Members. The annual report might be the right forum to thank all those contributing to the growing of the Federation.

We all know that new developments thrive best in a harmonious environment when investigators can readily form multinational collaborations. This kind of progress is best made when researchers are enjoying the fruits of prosperity associated with conditions of international stability and peace. I deeply believe that international organizations like the IFCC create this spirit and facilitate the mutual understanding and collaboration beyond cultural and geographic barriers.

Mathias M. Müller  
President

## Executive Board (EB)

In 2003, the EB met in Vienna, Barcelona and Milan. The meeting in Vienna had originally been scheduled for Damascus but had to be changed due to the possibility of conflict in Iraq. The meeting in Barcelona was held prior to 15th IFCC-FESCC European Congress of Clinical Chemistry and Laboratory Medicine and the final meeting at the IFCC Office.

The meeting in Vienna was the first since the election of the new Executive Board which took place at the Council meeting during the 18<sup>th</sup> International Congress of Clinical Chemistry and Laboratory Medicine held in Kyoto in October, 2002. The President paid tribute to the contribution of former EB members, Dr Rosa Sierra Amor, Prof Paolo Mocarelli and Dr Ghassan Shannan.

A major point of discussion were the rules governing Affiliate and Full Membership. The EB is very aware that there are many professionals working in Laboratory Medicine who do not belong to the Society which is the IFCC Full member. The current Rules only allow one Full Member from each country and the EB feels that a new category of Associate Members needs to be considered. It was decided that a white paper to be discussed at the General Conference will be prepared. Some of the points to be considered are:

- Changing the name of the Federation to the International Federation of Clinical Chemistry and Laboratory Medicine challenges the IFCC to think more about the clinical as well as the scientific aspects of our profession. It also raises questions as to how we relate with other national and international organizations. In addition, now that we are 50 years old, it may be that we have to face up to the challenge that in some countries there may need to be more than one society which has input into IFCC and/or it may be that we currently do not have the correct professional society as the IFCC national society.
- The IFCC needs to define the characteristics of an IFCC member society. For example, they should be active in all issues relevant for the measurements (including standardisation), for pre-analytics, for post-analytics (including interpretation and clinical consulting), quality assurance and proficiency testing, total education in Clinical Chemistry and

Laboratory Medicine and, active in disseminating scientific and educational material.

- If there is more than one society from any country which holds membership in IFCC, is it appropriate (or even workable) to state that the country still has only one vote in IFCC matters and it is the responsibility of those several societies within that country to decide how the vote will be cast?
- If a new society emerges in any country which appears to meet the criteria better than the existing IFCC national society, is the Executive Board prepared to take to Council a recommendation that the existing National Society should be expelled and the new one accepted (assuming the new one wants to be considered as the new IFCC National Society)?
- The IFCC has been very fortunate in avoiding physician-scientist rivalries, which have been a source of problem in many national and international organizations. If the IFCC is going to pay more attention to Laboratory Medicine, then it will become more involved in clinical issues. What steps should it take to ensure that it avoids the creation of scientist/clinician rivalries?
- If it is not possible to move beyond one voting society, what type of membership category can be created that will allow IFCC to interact with more clinical (and hence more medical) organizations in different countries to fully extend its mandate into Laboratory Medicine? What category of membership and with what benefits, responsibilities and costs, could be created and would be of interest to those clinical societies?

The other major task undertaken at the meeting was to review the Statutes and Rules. These were updated to include Laboratory Medicine and preparations made for the changes to be put to the Members by Ballot. The IFCC Members endorsed the changes by postal ballot which was held in the second half of the year.

The main points of discussion at the EB meeting in Barcelona were the IFCC finances, Office restructuring and planning for the IFCC General Conference for May, 2004.

Some developments in Europe were discussed. In Germany, the two previous societies have formed the United Germany Society of Clinical Chemistry and Laboratory Medicine (DGKL) which will now be the IFCC member. A meeting was also held during the Barcelona Congress between members of the Portuguese association and IFCC Officers at which it was learnt that agreement had been reached to form an umbrella organization which would act as the link to IFCC. A draft constitution had been drawn up and negotiations were underway to get official recognition of this new Society. Further to this meeting, an application for IFCC membership was received in August and after a vote of the IFCC National Members, the Sociedade Portuguesa de Quimica Clinica became the new IFCC Member for Portugal.

The IFCC Office restructure was approved with Ms Lisa Ionescu being officially appointed as IFCC Office Manager, responsible for the quality and running of the office and Ms Raffaella Infanti appointed to the vacant full time position.

The final EB meeting for 2002 was held in the IFCC Office in Milan. Traditionally, the final meeting of the year is a review and budget-planning meeting and for part of the meeting, the EB was joined by the Chairs of Divisions who reviewed the previous year's activities and presented their draft budgets.

There was a comprehensive report from COLABIOCLI in which it was pointed out that accreditation is an issue in the region. The IFCC accepts ISO 15189 as the standard all laboratories should be aiming at. The EMD was requested to prepare an IFCC position statement on the implementation of ISO 15189 accepting that this is a gradual process with countries starting at different levels. This statement should include that any accrediting body should consult with the appropriate professional societies on how to implement the standard locally.

During the EB meeting, affiliate membership was granted to Sociedade Brasileira de Patologia Clinica Medicina Laboratorial (Brazilian Society of Clinical Pathology/Laboratory Medicine) (SBPC).

A major part of the meeting was taken up with reviewing the IFCC Strategic Plan. All points were discussed at length and appropriate changes made. It was generally concluded from this review that the IFCC has been successful in implementing many of the points in the Strategic Plan. The updated plan will be available for discussion at the General Conference.

In 2003, Prof Wieland Hölzel resigned as Corporate Representative from the EB. Dr. Bernard Gouget finished his 2<sup>nd</sup> term as chair of the CPD. During the EB Meeting in Milan the President acknowledged the contribution of both officers to the IFCC during their service.

### ***Professional Scientific Exchange Program***

The twinning program between two laboratories in different countries was founded so that young colleagues could participate in visits abroad. A total of 3 scholarships were granted in 2003. The recipients came from Costa Rica, France and Spain. They received training in Denmark and the United States of America. Their training was for bacteriology, biostatistics and mass-spectrometry.

The EB considers this program important for our young scientists and their future in the profession. As an example of the positive impact on the career of IFCC scholars it is mentioned that Monica Revello from Uruguay received recently her Ph.D. on basis of her research done during a visit abroad. National Societies are encouraged to promote the program and to submit applications.

### **Treasurer's Report**

The Treasurer presented a comprehensive report on the finances and the changes that have been made to the way these are being administered. Many of the daily functions have been given to the office. The EB was also informed that according to Swiss law, financial documents have to be kept for 10 years

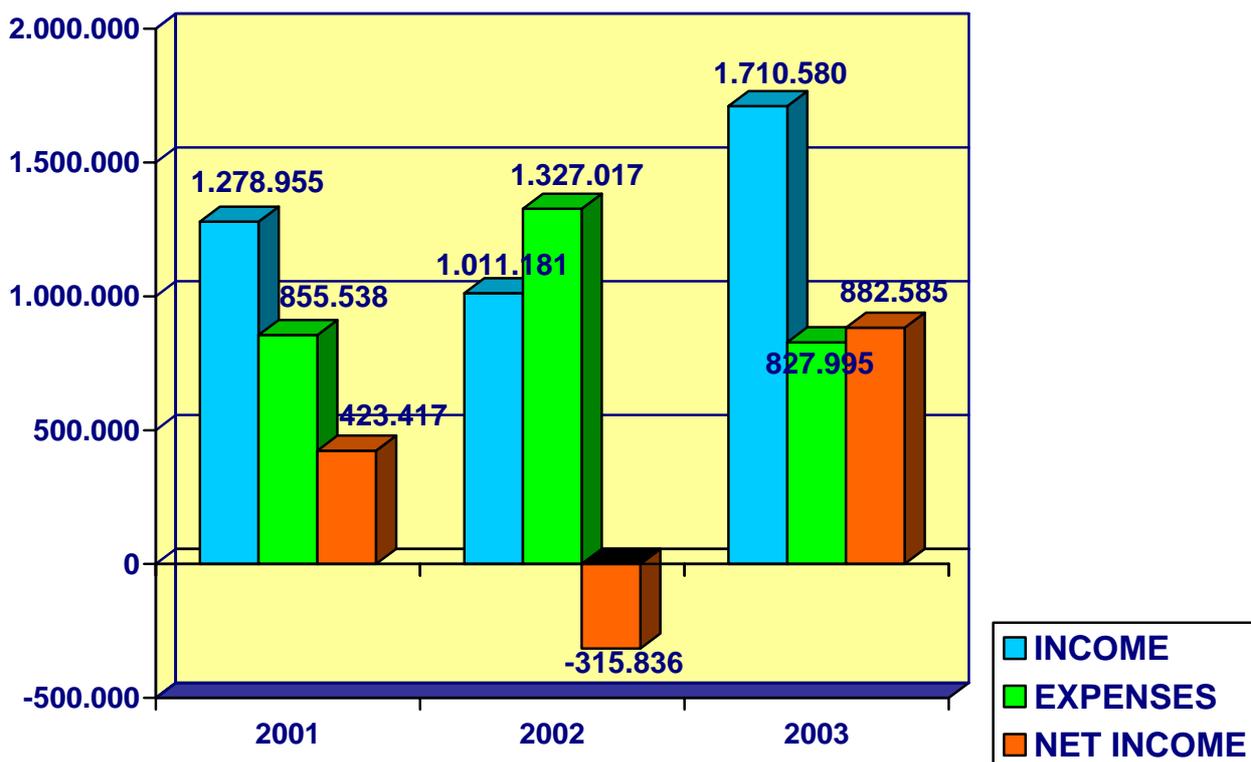
The year 2003 was a very successful year financially for IFCC. This was largely due to the income from two important meetings. The ICCG Congress, which was held in October 2002 in Kyoto, and the Euro Med Lab Congress, which was held in Barcelona in June 2003. The other major sources of income were from Member and Corporate Member dues. Both of these saw an increase in income from 2002. Our net income for 2003 was CHF 882'585.00. Corporate Member dues increased by 111'056.00. We have been very pleased to support 8 young scientists to visit other laboratories and conferences to learn new scientific approaches.

In 2003 several changes in the financial accounting were introduced.. We set up a new and clear filing system, where records are readily available. Together with up-dated guidelines for reimbursement of travel expenses a new claims form which can be filled in on the computer, was

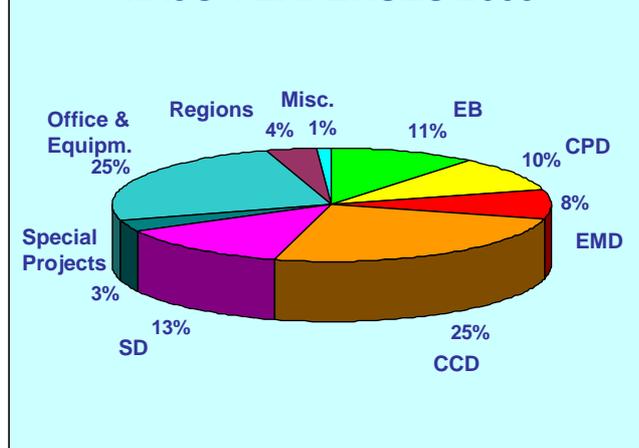
developed. The turnaround in expense claims has subsequently improved. Perhaps the most important change we introduced was to use the IFCC office for bookkeeping. The help of the Office Manager, Lisa Ionescu, has been invaluable. Our major expenses for 2003, as in all years, have been in supporting our major Divisions: Conference & Congress Division, Communications and Publications Division, Education and Management

Division and the Scientific Division. Other expenses include the support of Special Projects, the Executive Board and the Treasurer's office. The year 2004 will be a challenging one financially, since no major income from meetings are anticipated and all activities and projects will continue.

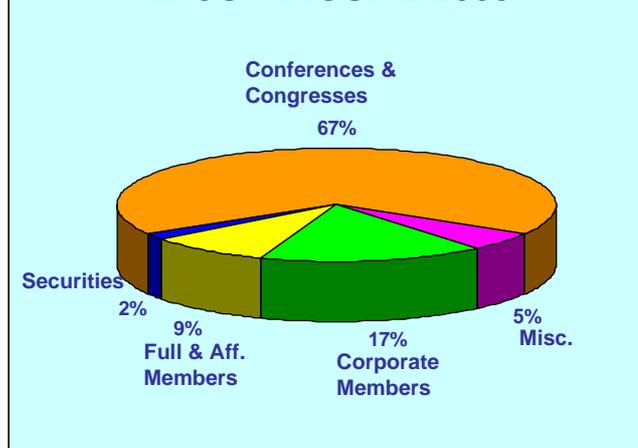
### A quick view of IFCC finances for 2001-2003



### MAJOR EXPENSES 2003



### MAJOR INCOME 2003



## Awards Committee

The following 2003 IFCC awards were presented at the 2003 15th IFCC-FESCC European Congress of Clinical Chemistry and Laboratory Medicine in Barcelona, Spain.

### 2003 IFCC/Abbott Award For Significant Contributions To Molecular Diagnostics

This award honours an individual or individuals who have made unique contributions to the promotion and understanding of Molecular Biology and its application in Clinical Chemistry and Laboratory Medicine throughout the world. The co-recipients of the 2003 award were **Professor Rogier Maria Bertina** from the Hemostasis and Thrombosis Research Center, Leiden University Medical Center, the Netherlands and **Professor Pieter Hendrik Reitsma**, Academisch Medisch Centrum, Afd. Experimentele Inwendige Geneeskunde, The Netherlands. Professors Bertina and Reitsma together are responsible for the original study and publication of the factor V Leiden mutation considered to be one of the most important risk factor for thrombo-embolic disease.

### 2003 IFCC/EDMA Award for Evidence of Effectiveness of Laboratory Tests.

The winner of the 2003 award was the Italian team of **Maria Giovanna Colombo**, Umberto Paradossi, Maria Grazia Andreassi, Nicoletta Botto, Samantha Manfredi, Serena Masetti, Andrea Biagini, Aldo Clerico from the CNR Institute of Clinical Physiology and G. Pasquinucci Hospitalin Massa, Italy for their paper entitled "Endothelial Nitric Oxide Synthase Gene Polymorphisms and Risk of Coronary Artery Disease" that was published in *Clinical Chemistry* 2003; 49: 389-395. Dr Colombo received the award and a cheque for ECU 7.500 at the Awards Ceremony of the Barcelona Euromedlab Congress and presented the paper in the IFCC/EDMA symposium.

## Communication and Publications Division (CPD)

The Executive Committee of the Communication and Publications Division for 2003 consisted of Bernard Gouget, Chair (FR), Andrew Wootton,

Vice-Chair, (AU), Peter Lehmann, Editor of Documents (US), David Williams, Editor-in-chief for eJIFCC (the electronic journal of IFCC) (UK), Ellis Jacobs, News Editor (US), and Craig Webster, Webmaster (UK). Some members were assisted by Working Groups on the eJIFCC- a true editorial group, the web site, and for IFCC news. A Working Group for Ibero-American nomenclature and translations was chaired by Xavier Fuentes Arderiu (SP). Assisting and guiding the Division were Corporate Member representative Heiko Zievogel (DE), and Executive Board liaison Christopher W K Lam (HK).

During the year an Editorial Board for eJIFCC serving also s as the WG-eJIFCC was formed. This group is chaired by W. Williams, UK.

The other significant activity was the redesign of the Website based on feedback obtained at the International Congress (Kyoto, October 2002) and the Euromedlab (Barcelona, June 2003). This has made it more easily navigated. For continuous update of the web-site Claudio Carnevali was added as a part-time professional to the office staff in Milan. Currently average daily sessions (times a new user visits) to the web site are 1100 (over 30,000 per month). This represents a doubling of daily visits since September 2000.

The top five visited locations are:

- Home page
- Search engine
- Document database
- July/August News
- Rincon Ibero-Americano (RIA)

During 2003 new publications were added to the IFCC database for documents and recommendations which developed to a valuable source for visitors of the web.

There had been 2 business-meetings with Walther de Gruyter publisher. The collaboration agreement between IFCC and Walter de Gruyter publisher had been updated. Part of this agreement is also the fact that representatives of the IFCC members receive free electronic access to the CCLM, the main scientific journal for IFCC recommendations.

## **Congress and Conference Division (CCD)**

### ***International Congresses of Clinical Chemistry and Laboratory Medicine***

The next International Congress of Clinical Chemistry (ICCC) will be held in Orlando, U.S.A., July 24-28, 2005. It will be the joint meeting of the 19<sup>th</sup> ICCCLM and the 2005 Annual Meeting of the American Association for Clinical Chemistry. The role of CCD during 2003 has been to promote proposals for IFCC symposia.

The 20<sup>th</sup> ICCCLM will be held in Fortaleza, Brasil, October 6-10, 2008. The main working bodies of the congress have been established. Emmezeta Congressi will help in arranging the exhibition.

### ***Regional Congresses***

There are four regions within IFCC and each of organises its own Regional Congresses of Clinical Chemistry and Laboratory Medicine (RCCCLM). There were two RCCCLMs during 2003. The Central and South American Region (COLABIOCLI) held its RCCCLM, the 16th Latin American Congress in Clinical Biochemistry, in San Jose, Costa Rica, April 30 to May 2. Delegates from eighteen countries from the Latin America region were present. For the first time at a COLABIOCLI RCCCLM, the IFCC CPD gave two awards to the best young scientist's presentation. The next COLABIOCLI RCCCLM will be held in Asuncion, Paraguay in April 2006.

The European RCCCLM, the 15<sup>th</sup> IFCC-FESCC European Congress of Clinical Chemistry and Laboratory Medicine, Euromedlab, was the most prominent congress event during 2003. It was held in Barcelona, Spain, June 1-5. The grand total of participants was 4907 from 73 different countries. Due to high number of delegates and the outsold exhibition space, the congress was also an economical success. From the perspective of CCD, this congress formed a model for future on how to plan, organise and promote a scientific congress on laboratory medicine. The next Euromedlab will be in Glasgow, Scotland, May 8-12, 2005. Its theme is "Focus on the Patient". The organising committee is chaired by Graham Beastall, the former chairman of CCD. In 2007, Euromedlab will be celebrated in

Amsterdam, The Netherlands.

The other regions will have their RCCCLMs during 2004. The 10th Arab Congress of Clinical Biology will be held in Monastir, Tunis, May 17-21. Many IFCC activists are supposed to participate the congress, since the IFCC General Conference will be immediately before it in Sousse, Tunis. The theme of the 10<sup>th</sup> Asian Pacific Congress of Clinical Biochemistry, to be held in Perth, Western Australia, 18-23 September, is "Towards Better Health: prediction, diagnosis and monitoring". Eighteen symposia will form the skeleton of the scientific program. The 11<sup>th</sup> Asian Pacific RCCCLM is scheduled in Beijing, China, in 2007.

### ***IFCC General Conference***

The IFCC office has taken care of organising the IFCC General Conference, which will be held May 14-17, 2004, in Sousse, Tunis, as a satellite meeting of the 10th Arab Congress of Clinical Biology.

### ***IFCC Specialist Congresses***

The 9<sup>th</sup> Bergmeyer Conference with theme "Nucleic Acid Markers for Bacterial and Viral Infections in Intensive Care and Immunocompromised Patients" was held in Eibsee, Germany March 24-26 and Beckman Coulter Protein Conference 2003 "Biological and Cellular Applications of Protein in Medical Laboratory" as a satellite meeting of European RCCCLM, May 30-31, in Barcelona, Spain. Josefina Mora will continue as CCD representative in the steering group of Beckman Coulter Protein Conferences. Istvan Vermes was nominated to the steering committee Bergmeyer Conferences.

### ***IFCC Auspices***

CCD awards IFCC Auspices to high quality conferences in the area of clinical chemistry and laboratory medicine. This arrangement is mutually beneficial. It enables IFCC to promote congresses of interest to its members and strengthens IFCC image as supporter of high level laboratory science. The organisers of congresses get lots of publicity through the information channels of IFCC. During 2003 IFCC Auspices awarded to eight conferences.

### **Meetings and Membership**

CCD had two meetings, one in Barcelona, Spain in connection of the European RCCCLM and the other in IFCC technical office in Milan, Italy. In between times electronic communication was utilised.

Great changes in membership took place at the beginning of 2003. Graham Beastall (UK) and Herman Wisser (DE) completed their terms of office as elected and Paul Whitlock completed his term of office as the Corporate Member. CCD warmly acknowledge the great contributions of all of them to the congress and conference activities of IFCC. Istvan Vermes (NL) and Andreas Rothstein (CO) were welcomed as new members, but the division still lacks the Corporate Member. Lasse Viinikka (FI) was appointed to follow Graham Beastall as the chair of CCD.

### **Education and Management Division (EMD)**

In the year 2003 EMD aimed to continue its policy to offer the IFCC membership insight into modern developments in clinical chemistry and laboratory medicine. On one hand this is being done by direct interaction via the Visiting Lecturer Program (VLP), courses on various topics, and a Master Course in Laboratory Sciences. Also, programs were and are being developed to use modern technologies for education purposes. The education in evidence based laboratory medicine and the support of national QA programs in a number of countries continued to form an important part of the main activities of the Division. Formulating and describing management tools was continued by the creation of a new Committee on Clinical Laboratory Management.

To review, plan, and secure all activities of the Division, all officers of the Division gathered for a meeting in Garderen, the Netherlands, from May 9 till 12.

For every group within EMD, the following items were presented and discussed: an overview of her/his activities in the last year; future plans, activities and meetings; co-operation with other groups within the Division; review membership, if necessary; indicate what budget is necessary for the activities (also 2004); mention all other relevant issues.

Where possible, co-operation between the activities of the groups was discussed.

In the following part the activities of the different Committees (C) and Working Groups (WG) in the Division during the year will be briefly reviewed.

### **Executive Committee (EC)**

The Executive Committee continued this year to direct its activities to developing future strategies and to guiding the activities of the different parts of the Division. The EC choose this year not to expand its membership beyond the three colleagues constituting it. For the coming years continuity will be guaranteed by increasing the members. It is preferred that one of these new EC members is from the Asian Pacific Region since the EMD has few activities in that region. Most of the C and WG members are from other parts of the world.

The EC met three times in 2003. At the general Division meeting in Garderen, the Netherlands, in May, at the AACC meeting in July in Philadelphia, USA, and in December in Los Angeles, USA. Every time the continuity of activities and programs was reviewed. When judged appropriate, Committees and Working Groups were stimulated. New developments in the profession relevant for our goals were considered, and plans for the future were discussed.

It is the intention to develop more courses directed at teaching modern technologies in clinical chemistry and to maintain and extend the existing ones. In trying to do so, the EC noticed that the leaders in all these fields are professionals who are very much engaged; consequently, it is difficult for them to spare enough time for EMD next to their own research and teaching.

The use of the internet for educational purposes forms a continuous point of attention. The EC is trying to review the different aspects related to the development of a textbook in clinical chemistry on the IFCC Website. Texts are of course available, but a good program for their maintenance and continuing update will necessitate a great effort.

### **Committee on Clinical Molecular Biology Curriculum (C-CMBC)**

A C-CMBC meeting was held in Milan, Italy, on February 8<sup>th</sup>, 2003. The agenda of a training course was discussed. And so the 1<sup>st</sup> IFCC Clinical Molecular Biology Course was organized in Milan from July 1<sup>st</sup> until 5<sup>th</sup>, 2003 at the San Raffaele Hospital. This 5-day course handled the basic

knowledge on DNA/RNA, PCR principles, lab structure, and practical trainings.

Target : low experienced colleagues, number of participants: 20. This course was supported by the San Raffaele Hospital and Roche Diagnostics.

Plans for the coming year were made as well, for a theoretical and a practical course.

A co-operation with the Association for Molecular Pathology (AMP) was being discussed and in the next year further plans will be made.

### **Committee on Analytical Quality (C-AQ)**

The chairmanship of the Committee was taken temporarily by Adam Uldall for one year.

Ken Sikaris from Australia has been found willing to take this position from 2004 on. The Division is very grateful to Adam Uldall for assuming the role of Chair for the Committee for 2003.

Education and management have been the main areas for the activities of C-AQ and focus of the activity was improvement of analytical quality in the medical laboratory. The activity of C-AQ was concentrated on situations where improvements of analytical quality were needed. The educational aspects of external quality assessment schemes (EQAS) and external quality assurance programs (EQAP) have been one of the main tools. This has for example been implemented through the Serum Donation Projects (SDP) in those developing countries where such EQAS/EQAP have been lacking. Other EQAS/EQAP related activities were Software for EQAS management and data handling, developing Guidelines on EQAP, Courses & Publications, and co-operation with IRMM on the IMEP-17 study. Network of Reference Laboratories for Enzyme Measurement (NERLM) was a further activity.

For some time it was unclear how the work in C-AQ should be developed in the future, because C-AQ was awaiting the appointment of the future chairman of the committee. However in the middle of 2003 Dr. Ken Sikaris, Australia, accepted to take over the chair of C-AQ from the beginning of 2004. C-AQ conducted a meeting in Milan 17-18 of November, where both the new Chair, Ken Sikaris, the current Chair Adam Uldall, and the past Chair, Daniel Mazziotta participated together with the current four members of the committee and the Chair of EMD, Gerard Sanders. In this way an appropriate continuation of the current work was ensured.

Among the decisions from the meeting some points can be mentioned, e.g.:

- The terms of reference of the C-AQ will be revised;
- Three to five courses/symposia are being planned;
- At least one of these will be dealing with general analytical quality and directed to the laboratory staff in the routine laboratory;
- Others will be devoted to the organisers of EQAS/EQAP;
- The SDP will be continued (at least one application will be received in 2004);
- C-AQ will support further development of the reports of IMEP-17 (see [www.imep.ws](http://www.imep.ws))

C-AQ will work on the formal approval of the ILAC/IFCC guidelines for the requirements for the competence of EQAP organizers.

C-AQ published in 1996 the IFCC guidelines on how to establish and run EQAS. The document was called the "Fundamentals" and it is found on the web page of EMD. This document had been translated to many different languages. Due to very valuable efforts of Dr. Frans Sardi Satyawirawan, Dr. Erwin Silman## and Dr. Nur Asikin, Jakarta, it is now also available in Indonesian language as a printed version (it is distributed to the members of Indonesian Association of Clinical Chemistry and to some colleagues in Malaysia, Brunei and Singapore). It will be distributed to the participants at relevant C-AQ courses/symposia in the region. A copy of the document may be requested from The Indonesian Society of Clinical Chemistry (contact Dr. Frans Sardi Satyawirawan, Jl. Letjen Suprpto 504C, Jakarta Pusat 10530, Indonesia, alternative use [medilab@indosat.net.id](mailto:medilab@indosat.net.id)) There was also a discussion concerning the availability of the document through the IFCC web page.

## Dr. Erwin Silman passed away on Monday Jan 12, 2004, 53 years of age.

### **Committee on Evidence-Based Laboratory Medicine (C-EBLM)**

This committee has been very active implementing its goals. These are:

- Promote the understanding and the methodology of EBLM by educating laboratory professionals (how to find, appraise, and act on evidence);
- Support rational laboratory use by implementation of results from EBLM to

daily practice by educating laboratory professionals (how to perform primary studies of the usefulness of tests, how to carry out systematic reviews, how to make and implement EB guidelines);

- International dissemination of and collaboration in EBLM.

The C met twice in 2003: 8-9 May Amsterdam, The Netherlands, and 28-29 November Budapest, Hungary. At these meetings all activities of the C were discussed extensively, future plans were outlined, and co-operations were reviewed. One of the issues discussed was the scope of EBLM. The question was raised whether certain pre-analytical or analytical aspects do, or do not belong to the scope of EBLM. Most committee members and external reviewers supported the view that the scope of EBLM should encompass all elements of the diagnostic process or performance of tests which, even if indirectly, contribute to improved outcomes. Representatives of C-EBLM were present at the Cochrane Colloquium: 26-30 October, Barcelona, Spain.

As far as educating the membership of IFCC is concerned the C was very active. There were 14 invited lectures in the Netherlands, Mexico, UK, Spain, Croatia, Australia and Ireland. Many publications resulted from the work of C-EBLM:

3 book chapters in: Evidence-based Laboratory Medicine: From Principles to Practice. Price CP, Christenson RH (eds) AACCC Press, Washington. 2003;

2 international papers in: Indian J Clin Biochem and eJIFCC, 2003;

2 papers accepted in: Clin Chim Acta and Clin Chem (to be published in 2004)

6 publications in national journals: 3 in Hungarian, 1 in French, 2 in Danish, as well as 6 conference abstracts

Co-operation: Since this field is very large many groups are working on EBM. The Committee therefore continued establishing collaborations with organizations like: Bayes Library project, Cochrane Collaboration, Diagnosis and Screening Methods Group, GRADE working group, AGREE Collaboration and Guidelines International Network (G-I-N).

Within the framework of IFCC the C took part in activities such as: IFCC EMD EPO-WG, and IFCC

Global Campaign on DM, and NACB (guideline on POCT in DM).

Many future plans for the term until 2005 have been made already.

In view of the past work and the most recent developments in the field of evidence-based diagnosis, the main focus of the committee will be:

- Education and training of the IFCC community in EBLM (workshops, teaching materials)
- Evidence-based guideline development (methods, surveys, participation in pilot projects).
- Collaboration with the Cochrane groups and G-I-N
- Dissemination of EBLM (website, conferences, publications, surveys).

Lecturing at many international congresses is one of the ways to reach these goals.

#### ***Committee on Education and Curriculum Development (C-ECD)***

The Committee is engaged in education and curriculum design in clinical chemistry medicine at an international level. It continued these activities by publishing an article on Selected Modern Curricula and Training Program Requirements for Training in Clinical Chemistry and Medical Biochemistry. Moreover, an outline for a course in curriculum development was developed, and educational modules in clinical laboratory medicine were created. The C guides the WG on the La Plata master course in clinical chemistry and is engaged in distance education via the WG devoted to this topic.

To assess interest and needs for curriculum and/or continuing education of member societies in 2003 a questionnaire was developed. This document will focus towards national societies in developing nations, where IFCC could make the most significant contribution in education and would also be most appreciated.

#### ***Committee on Clinical Laboratory Management (C-CLM)***

EMD-EC believes that it is essential that EMD should provide clinical laboratory management expertise and resources to the IFCC membership. The need for basic financial and managerial skills has been repeatedly stated during numerous meetings and visits to various member countries.

Therefore, this Committee started in 2003, based on a previous one directed to financial laboratory management. It has produced a 7-item plan of action.

The primary focus of the committee will be to provide basic management skills to the widest possible audience most in need of these resources, i.e., the developing /emerging member nations. This will be done by the production of handbooks, monographs, CDROMs; these materials will also become available on the IFCC Website.

As a first example of these activities a monograph on the management of change in laboratories was written; it will become available early 2004.

#### **Working Group Master in Clinical Laboratory Science (WG-MLS), the La Plata Masters Program**

With this program IFCC has shown its commitment on educating young laboratory scientists in their own environment. The University of La Plata was chosen for this model and the second course nears completion. The visits of three professors were facilitated; they lectured on flow cytometry, laboratory management, and tumour markers.

It is to be expected that the IFCC financial and organizational involvement in this program will be completed in 2004.

Four publications resulted in 2003 about the MLS. These serve as a blueprint and handbook for those societies wishing to start such a program elsewhere in the world.

#### **Working Group on EPO (WG-EPO)**

This WG is preparing a document on the laboratory management of r-HuEPO therapy. Funds have been obtained from Roche. It continued its work, which is gradually making progress. In 2003 the WG had one meeting in Barcelona; a workshop was organized in Barcelona.

#### **Working Group on Reviewing Educational Materials (WG-REM)**

This WG was set up to review educational materials submitted to IFCC for consideration. In the past year only a few documents and CDROMs were offered to this WG. It is hoped that in the coming year more use of the WG will be made.

#### **Working Group on Distance Education (WG-DE)**

This WG was created during this year and is engaging itself with the use of modern media for education purposes. On one hand it concerns Websites providing "state of the art" tutorials in clinical chemistry and laboratory medicine on national level, existing groups for continuous education, types of undergraduate, postgraduate and continuous education, and possibilities for introduction of distance learning programs. Also, the WG will be engaged with preparing instruction on how educational materials have to be prepared to achieve needs for all students in biomedicine (medicine, medical biochemistry, biology, pharmacy and dentistry)

#### **Visiting Lecturers Program (VLP)**

*This program facilitates the visit of lecturers to meetings in countries where an important need for education exists. IFCC is thus filling in one of its educational commitments. The program got an extra impetus by the financial support from DPC.*

So far this year, the following travels of lecturers to developing countries have been supported.

- Dr Sverre Sandberg (Norway) - XXVI National Congress in Clinical Biochemistry, 2-9 March, San Luis Potosi, Mexico. Subjects: evidence based laboratory medicine, IFCC Global Campaign, diabetes mellitus;
- Dr Larry Kricka (USA) - XXX Congresso Brasileiro de Analises Clinicas, 8-12 June, RioCentro, Rio de Janeiro, Brazil. Subject: benefits of miniaturization in clinical testing;
- Dr Emilia Martinez (Mexico) – Colegio de Microbiologos y Quimicos Clinicos de Honduras, 28-31 July, Tegucigalpa, Honduras. Subjects: Quality Control, HbA1c, Forensics;
- Dr Sylvia Grazia (Spain) – National Congress of the Asociacion Bioquimica Uruguayana, 12-14 September, Uruguay. Subject: evidence based laboratory medicine;
- Dr Sverre Sandberg (Norway) – Sixth Conference of the Syrian Clinical Laboratory Association, 18-25 October, Damascus, Syria. Subjects: Global Campaign of Diabetes Mellitus, EBLM;
- Dr Rosa Sierra Amor (USA) - VII National Congress in Clinical Biochemistry, 29 October 29 - 1 November, Cuenca,

Ecuador. Subjects: bone remodelling, management in the clinical laboratory;

- Dr Blanca Restrepo (USA) - National Congress of the Colombian Society for Clinical Chemistry, October 30 - November 3, Medellin, Colombia. Subject: infectious diseases and parasitology.

### **Course on Flow Cytometry**

Due to unforeseen circumstances, the course planned for July 3-6, 2003 in Seeheim, Germany did not take place. It had to be cancelled at a late stage. Activities have started to continue with organizing a symposium and a course as in the previous years. Co-operation with the International Society for Analytical Cytometry (ISAC) is further investigated.

### **Conclusion**

The Division is in good shape. Most Cs and WGs are actively engaged with their goals. Tangible results have been reached such as articles, lectures, courses etc.

Within the Division a very positive atmosphere exists and all officers of the Division will do their utmost best to keep it as such and promote all aspects of education in the IFCC.

### **Scientific Division (SD)**

During 2003, the following members served on the SD Executive Committee: Jean-Claude Forest (Canada) (Chair), Mauro Panteghini (Italy) (Vice-Chair), Howard Morris (Australia) (Secretary), Ian Young (UK), Nader Rifai (USA), Ulf-Hakan Stenman (Finland), Rolf Hinzmann (Germany) (corporate representative), and Carl Burtis (USA) (EB-Liaison). Three representatives of International Organizations are invited to attend the Scientific Division meeting as consultants: Jos HH Thijssen (JCTLM), Heinz Schimmel (IRMM), William Koch (NIST, March 2003), Michael Welch (NIST, October 2003). Two meetings were held during the year 2003 (both in Milan), March 29-30 and October 19-20.

### **Relationship with International Organizations**

The Scientific Division has pursued the expansion of its activities to partner with international

organizations to promote the implementation of the concept of traceability in laboratory medicine and the implementation of reference measurement systems.

### **Joint Committee on Traceability in Laboratory Medicine (JCTLM)**

The Joint Committee for Traceability in Laboratory Medicine (JCTLM) has been formally created through a declaration of cooperation between the International Committee of Weights and Measures (CIPM), the IFCC and the International Laboratory Accreditation Cooperation (ILAC). IFCC has two seats on the Executive Committee of JCTLM (The president and the chair of SD) and has the responsibility to assume the Chair of the Executive Committee for the next two years (Professor Thijssen). Two working groups in which members of various Scientific Division Committees and Working Groups actively participate, have been established. The first Working Group on Reference Measurement Procedures (RMPs) and Reference Materials (RMs) has the mandate to establish a process for identifying and reviewing against agreed upon criteria (ISO standards 15193 and 15194), and publishing list(s) of higher order certified RMs and RMPs required for industry to comply with the EC directive regarding in *in vitro* diagnostic medical devices. The second Working Group on Reference Laboratories has the responsibility to collect information on existing and candidate reference laboratories, to establish means of assessing performance and to devise procedures for accreditation in the future.

### **Institute for Reference Material and Measurement (IRMM)**

Close collaboration with IRMM continues with practical joint ventures such as with reference materials for Plasma Proteins (CRM470), cortisol panels (IRMM/IFCC 451), enzymes (IRMM/IFCC 452, 453, 454, 455). Further materials are in the process of certification including HbA1c, aspartate aminotransferase (AST), myoglobin (IRMM/IFCC 458) and recertification of a new lot of plasma protein standard for CRM470.

### **National Committee for Clinical Laboratory Standards (NCCLS)**

The good working relationship between NCCLS and IFCC continues. Joint projects with NCCLS are reviewed on a regular basis. SD has recently defined a procedure to review joint NCCLS/IFCC projects. The document on bone markers (C48) has come to a conclusion. It is the first example of the joint NCCLS/IFCC collaboration.

Current ongoing joint NCCLS/IFCC projects include: Free Thyroid Hormone Measurements; Application of Biochemical Markers of Bone Turnover in the Assessment and Monitoring of Bone Diseases; Analysis of Body Fluids; Molecular Methods for Microarrays; Sample Collection and Handling for Molecular Test Methods; Quality Assessment Programs for Molecular Methods; Determining Clinical Utility of Genetic Tests; Performance of Cellular Immune Functional Assays; Protocols for Determination of Limits of Detection and Quantification; Body Fluid Analysis for Cellular Composition; Metrological Traceability and its Implementation; Mass spectrometry in the Clinical Laboratory: A Guideline to Implementation, Operation and Quality Assurance; IFCC project proposal on Total Plasma Homocysteine; IFCC project proposal on Immunosuppressive Drug Monitoring.

- **National Institute of Standards and Technology (NIST)**

A large number of projects are underway at NIST and some are of considerable interest to IFCC. These include: preparation of primary reference material for cardiac troponin I (cTnI), serum reference materials (SRM) for electrolytes, glucose, lipids, creatinine, homocysteine and folate. Each SRM preparation will consist of analytes at 3 levels in serum. The information related to homocysteine has already been conveyed to the WG on homocysteine. The establishment of a WG or a C on the standardization of steroid hormones is being considered.

- **Regional and other congresses**

The Scientific Division participated in the 15<sup>th</sup> IFCC – FESCC European Congress of Clinical Chemistry in Laboratory Medicine on an official basis contributing to the following five symposia: “Diabetes Mellitus: The global challenge”; “Advances in TDM in organs transplantation”; “Homocysteine”; “Interference in errors in

laboratory medicine”; “International collaboration in standardization”.

### ***Activities of Committees and Working Groups***

Most of the scientific and professional activities of the Scientific Division are carried out by the Committees (Cs) which are theme-oriented. Their work is often in close collaboration with other international organizations. For more specific tasks, the activities are normally accomplished through Working Groups (WGs).

#### ■ **Committees**

- **C-Nomenclature, Properties and Units (C-NPU)**

This IFCC/IUPAC Committee is responsible for the maintenance of the generic database which is now available through the IFCC website. C-NPU is currently investigating long term maintenance of the database and wider utilization at the international level. Currently, the committee is participating to the revision of the new edition of the VIM (Sub-Committee on Vocabulary in Metrology). A member of the committee is representing IFCC at the Sub-Committee on Vocabulary in Metrology and Guides to Expression of Uncertainty of Measurement in Metrology (GUMM) of the Joint Committee on Guidelines and Metrology (JCGM) of the International Organization for Standardization (ISO). Six projects are currently ongoing including Properties and Units for Transfusion Medicine and Immunohematology, Medical Molecular Biology, Urinary Calculi, Concept and Structure for request in Clinical Laboratories, Global use of the C-NPU concept system for properties in toxicology.

- **C-Molecular Biology Techniques in Clinical Chemistry (C-MBT)**

C-MBT, in cooperation with IRMM, pursued the production of a certified reference material for the analysis of the prothrombin mutation G20210A. The material has been prepared, and tested by experienced labs in a commutability study. The experimental work has been successfully completed. A manuscript has been prepared and is currently undergoing a revision process.

A new general direction was decided for this C during 2003 and a call for nominations was launched. The review process will lead to new orientations and a reformulation of the terms of reference. The group of experts to be selected will provide a more definitive orientation for the C-MBT such that it will be able to respond to the challenges faced by this field over the next decade.

- **C-Plasma Proteins (C-PP)**

The committee has completed a series of studies on international reference intervals for a range of plasma proteins in various ethnic populations. It has also completed an international quality control study to assess the effect of the introduction of the CRM470 Plasma Protein RM on the performance of their analyses in over 3000 laboratories across the world. The full reports of these studies will be published late in 2004 along with the reference interval studies looking at multiple racial and ethnic groups around the world in a special issue of CCLM. It has developed guidelines for the analysis of Bence Jones protein published in *Clinical Chemistry and Laboratory Medicine* (2003; 41:338-46). The committee is presently involved in the following projects for 2004-5: (1) collaboration with IRMM for the development and certification of a new lot of CRM470, to be called CRM470-R; (2) evaluation of the impact of new technologies for the study of human plasma proteome on laboratory medicine (in connection with HUPO); (3) elaboration of a position paper on comparison of agarose gel electrophoresis with capillary electrophoresis, and on other methods (such as quantification of serum immunoglobulin free light chains) for the detection of M components.

- **C-Standardization of Markers of Cardiac Damage (C-SMCD)**

The C-SMCD has continued its work on standardization of various cardiac markers. Secondary RM has been selected for myoglobin in close collaboration with IRMM. IRMM is working on the reference method for the certification of the selected material (IRMM/IFCC 458) as well as its further characterization. In collaboration with the AACC Subcommittee for Cardiac Troponin standardization and NIST, a candidate primary reference material for cTnI (human CIT tertiary complex NIST SRM 2921) was selected to be used for cTnI assay standardization. Further to the

preparation of this primary reference material, discussions are underway for the preparation of a secondary matrix reference material for cTnI for which the values can be assigned by an immunoassay method, which demonstrates equimolarity and is calibrated using the primary material. A study on the imprecision of cardiac troponin assays at low range concentrations has been completed and published in *Clinical Chemistry* (Feb 2004, issue). The C-SMCD is evaluating the need to implement Brain Natriuretic Peptides (BNP and NT-pro BNP) standardization strategies. In addition, committee activities addressing biomarkers of ischemia and risk stratification in acute coronary syndrome patients are being explored.

- **C-Standardization of Coagulation Tests (C-SCT)**

This joint committee with the International Society of Thrombosis and Haemostasis (ISTH) has renewed its membership in 2003 and new orientations have been given to the committee. The main projects are: Standardization of Protein C and pre-analytical factors affecting coagulation testing; Standardization of Antithrombin III; Standardization of POCT for coagulation testing.

- **C-Reference Systems for Enzymes (C-RSE)**

A meeting was held during the Barcelona Meeting. The current status of the newly recommended reference procedures for ALT, AST, GGT, CK and LD was discussed. Reference intervals for the 37°C reference procedure for amylase were presented by two members of the group and the data collected were considered to be sufficient for use as preliminary reference intervals in the publication of the IFCC Reference Procedure. A candidate RM for AST has been selected and will be certified very soon in cooperation with IRMM. A draft proposal of the RMP ALP was internally distributed for discussion. A study design for a 37°C reference procedure for Alkaline Phosphatase is underway with a view to replacing the existing 30°C procedure (IFCC draft document from 1983). A survey on the use of serum cholinesterase was performed at the international level involving IFCC national representatives. Results are expected to be presented during the IFCC General Conference.

- **C-Point of Care Testing (C-POCT)**

During 2003, the Working Group on Selective Electrodes and Point of Care Testing has been transformed into a Committee with the following terms of reference: To contribute, as a general objective, to the development of international standards for point of care testing, and in particular through current applications such as glucose, blood gases, electrolytes, coagulation; To make recommendations on quality assessment of glucose measurement in different health care settings; To establish parameters for utilisation of point of care testing devices based on levels of uncertainty clinically acceptable for particular analytes; To monitor new domains of implementation of point of care testing and to devise evidence based approaches of clinical utilisation; To complete work already underway in the working group.

The call for nominations was sent early in 2004. The group completed a document entitled: "Recommendation on reporting results for blood glucose" which was submitted to National Societies for voting as an official IFCC recommendation early in 2004.

- **C-Traceability in Laboratory Medicine (C-TLM)**

This newly formed committee will have as its main function the preparation of state of the art statements regarding traceability in Laboratory Medicine, permitting IFCC to play its international role in this area in providing and operating links between the Scientific Division and the Working Groups of the Joint Committee on Traceability in Laboratory Medicine. It will also monitor the implementation of new international directives and standards such as the European IVD directive 98/79, and relevant ISO standards; it may also contribute to the development of guidelines for the recognition of reference laboratories and the establishment of external quality assessment schemes for reference laboratories for monitoring competence by participating in comparative measurement campaigns (ring trials). The nomination process for members of the committee has been completed.

- **Working Groups**

- **WG-Reference Methods for Apolipoproteins (WG-MA)**

CDC serves as repository for the WHO-IFCC First International Reference Reagents for Apolipoproteins A-1 and B. There are approximately 2 000 stored vials of Apo A-1 (SP 1-01) and 77 vials of Apo B (SP 3-07). SP 3-07 is currently being replaced by preparation SP 3-08, a serum pool prepared according to NCCLS 37-A Guidelines. After completion of the studies, the material will be submitted through IFCC to WHO for recognition.

- **WG-Human Chorionic Gonadotrophin (WG-SHCG)**

The six human chorionic gonadotrophin (HCG) related reference preparations accepted by WHO as international standards for immunoprocures with assigned values in molar units are being used at a faster rate than expected, which represent a great success. Remaining purified materials, which amount to approximately 600 mg, are currently stored at NIBSC. Part of the materials might be used to prepare a second batch of standards and the remaining fractions are presently the subject of discussion for future utilization.

- **WG-Standardization of Lp(a) (WG-LP(a))**

This working group has completed its work, having succeeded in developing an international standard intended for the transfer of a Lp(a) concentration to manufacturers' master calibrators. Indeed, IFCC SRM 2B has recently been accepted by WHO as the first WHO International Reference Reagent for Lp(a) for immunoassays. The assigned unitage is 0,1071 nanomole of Lp(a) per vial and is traceable to the consensus reference procedure for Lp(a). The WG has submitted a paper on this subject.

- **WG-Glycohemoglobin (HbA1c) (WG-HbA1c)**

This WG has played an important role in the global campaign on diabetes led by the IFCC. The reference procedure for measurement of glycated hemoglobin has been published in CCLM in 2002 and already a number of manufacturers have recalibrated their reagents accordingly. Since reference intervals obtained with the IFCC reference method are somewhat lower than those obtained with previously published methods, global acceptance will necessitate cooperation between

various organizations to determine and alleviate the implications for clinical practice.

- **WG-Nanotechnology (WG-NT)**

This rapidly evolving field of laboratory medicine is monitored through a comprehensive review of the world literature that has been made available as a database on the World wide web.

- **WG-Monitoring Immunosuppressive Drugs (WG-MID)**

During 2003, this WG has mainly concentrated its efforts in organizing or participating in symposia and/or workshops such as during the Barcelona meeting, during the AACC meeting or during the IATDMCT meeting in Basel in September. Several presentations were given by the members of this WG on monitoring immunosuppressive drugs with reference to practice guidelines or methods.

- **WG-Standardization of Hemoglobin A<sub>2</sub> (WG-HbA<sub>2</sub>)**

As its first action, this WG has defined the analyte HbA<sub>2</sub>. As a second step, it will undertake the preparation of pure HbA<sub>0</sub> and pure HbA<sub>2</sub> materials followed by assessment of purity, preparation of primary RMs, development of a reference procedure for HbA<sub>2</sub> and finally preparation of secondary reference materials.

- **Project Proposals**

Ten project proposals have been received and dealt with during this year. One was accepted as a working group (WG-HbA<sub>2</sub>) and one became a committee (C-TLM). Two are pending.

## **IFCC Publications, 2003**

*The following publications appeared in 2003 as a result of IFCC projects. A number of other papers are in progress and are available through the IFCC Web Site.*

### **IFCC Committee/Working Group Publications 2003**

#### *Bergmeyer Conferences:*

Kallner K, Müller M M, Hölzel W (eds). . 9th Bergmeyer Conference - IFCC-Roche Diagnostics Master Discussion. Nucleic Acid Markers for Bacterial and Viral Infections in Intensive Care and Immunocompromised Patients. Scand J Clin Lab Invest 2003; 63 (Suppl 239):1-57.

#### *SD-C 8.2.13 Committee on Plasma Proteins:*

Graziani M, Merlini G, Petrini C; IFCC Committee on Plasma Proteins; SIBioC Study Group on Proteins. Guidelines for the analysis of Bence Jones protein. Clin Chem Lab Med 2003;41(3):338-346.

#### *SD-WG 8.3.16: Working Group on Standardization of HCG Measurements:*

Birken S, Berger P, Bidart JM, Weber M, Bristow A, Norman R, Sturgeon C, Stenman UH. Preparation and characterization of new WHO reference reagents for human chorionic gonadotropin and metabolites. Clin Chem 2003; 49:144-154.

#### *SD-WG 8.3.19: Working Group on Standardisation of HbA1c:*

John WG. Hemoglobin A1c: analysis and standardisation. Clin Chem Lab Med 2003; 41:1199-1212.

#### *EMD-C 9.2.8: Committee on Curriculum Development:*

Fink NE, Allen LC. IFCC Handbook on Master Program in clinical laboratory sciences. Clin Chem Lab Med 2003; 41:1379-1386.

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Updated information is available at the IFCC web site at [www.ifcc.org](http://www.ifcc.org)

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